

COMBUSTION LINER CAP ASSEMBLY FOR COMBUSTION DYNAMICS REDUCTION

ABSTRACT OF THE DISCLOSURE

A combustion liner cap assembly includes a cylindrical outer sleeve supporting internal structure therein and a plurality of fuel nozzle openings formed through the internal structure. A first set of circumferentially spaced cooling holes is formed through the cylindrical outer sleeve, and a second set of circumferentially spaced cooling holes is formed through the cylindrical outer sleeve. The second set of cooling holes is axially spaced from the first set of cooling holes. The resulting construction serves to decrease combustion dynamics in a simplified manner that is retrofittable to current designs and reversible without impacting the original configuration. The reduction in combustion dynamics improves hardware life, which leads to reduced repair and replacement costs.